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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,075	10/03/2003	Steven Durham	ECS-P-09-001	3549
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EXAMINER				
A. PHU DIEU TRAN				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/679,075

Applicant(s)

DURHAM, STEVEN

Examiner

PHI D. A

Art Unit

3633

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21, 23-29 and 31-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21, 23-29, 31-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/S5108)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 36, 41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 36 “the inverter” is lacking antecedent basis.

Claim 41 “are and” are confusing.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 21, 23-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Kowalski(5570000).

Stanley et al (figure 1) shows a canopy defining a sheltered area thereunder, the shelter area including at least one vehicle parking space, the canopy including an upper surface and a lower surface, a supporting structure (30, 34) connected to the supporting the canopy from a location outside the sheltered area and permitting substantially unobstructed access by a vehicle to the sheltered area, a light emissive device (98) mounted on the lower surface and operatively connected to the lower surface, the shelter having no walls, the canopy is tiltable and the position

of the canopy panels are adjustable, the canopy having a curved structure that is downwardly concave.

Stanley et al does not show the canopy being a photovoltaic canopy capable of producing electrical energy, the upper surface including a photovoltaic device that is capable of producing an electrical current when exposed to light.

Kowalski discloses a canopy being a photovoltaic canopy capable of producing electrical energy, the upper surface including a photovoltaic device that is capable of producing an electrical current when exposed to light, a light emissive device mounted on the lower surface and operatively connected to the device for utilizing the electricity generated by the photovoltaic device when the device is exposed to light.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's structure to show the canopy being a photovoltaic canopy capable of producing electrical energy, the upper surface including a photovoltaic device that is capable of producing an electrical current when exposed to light as taught by Kowalski in order to utilize electricity generated by sunlight to illuminate an area underneath the canopy resulting in utility cost saving, and lighted sheltered area.

3. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Kowalski (5570000) as applied to claim 21 above and further in view of Ho (6895145) and Laaly et al (4860509).

Stanley et al as modified shows all the claimed limitations except for the device comprising flexible thin film photovoltaic systems, the light emissive device comprising stacked light emissive layers.

Ho discloses the use of light emissive layers to provide light to an area.

Laaly et al discloses the use of layers of thin film photovoltaic system to generate electricity (col 8 line 46).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structures to show the device comprising flexible thin film photovoltaic systems as taught by Laaly et al in order to provide an efficient photovoltaic system, and having the light emissive device comprising stacked light emissive layers as taught by Ho would have been within one of ordinary skill in the art in order to provide illumination with minimum electrical usage.

4. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al in view of Kowalski(5570000) as applied to claim 21 above and further in view of Albright et al (5674325).

Stanley et al as modified shows all the claimed limitations except for the photovoltaic canopy is substantially transparent.

Albright et al discloses photovoltaic device being transparent (col 6 lines 23-24).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show the photovoltaic canopy is substantially transparent because the transparent canopy allows for the good production of electricity as taught by Albright et al.

5. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al in view of Kowalski(5570000) and Albright et al as applied to claim 26 above and further in view of Ho (6895145) and Laaly et al (4860509).

Stanley et al as modified shows all the claimed limitations except for the device comprising layers of flexible thin transparent film photovoltaic systems and light emissive layers.

Ho discloses the use of light emissive layers to provide light to an area.

Laaly et al discloses the use of layers of flexible thin transparent film photovoltaic system to generate electricity (col 8 line 46).

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structures to show the device comprising layers of flexible thin transparent film photovoltaic systems as taught by Laaly et al in order to provide an efficient photovoltaic system, and having the light emissive layers comprising stacked light emissive layers as taught by Ho would have been within one of ordinary skill in the art in order to provide illumination with minimum electrical usage.

6. Claims 28-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al in view of Kowalski (5570000) as applied to claim 21 above and further in Mori (3278811) and HO (6895145).

Stanley et al as modified shows all the claimed limitations except for an organic artificial light source layer associated with the underside of the canopy, a second photovoltaic device attached to the lower surface of the canopy.

Hiroshi discloses the use of an upper and a lower photovoltaic device to maximize the generation of electricity from its lighting environment.

HO discloses the use of either LED or OLED to display information

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show an organic artificial light source associated with the underside of the canopy since using OLED to light a surface area as taught by Ho enables the efficient utilization of electricity generated by the photovoltaic device, and having a second photovoltaic device attached to the lower surface of the canopy as taught by Hiroshi would maximize the generation of electricity from the environment as it utilizes the light source from both surfaces.

Per claim 29, Stanley et al as modified shows all the claimed limitations except for the OLED layer is dispersed within the second photovoltaic device.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show the OLED layer is dispersed within the second photovoltaic device since it allows for the easy mounting and attachment of the OLED layer to the canopy.

7. Claims 31-32 rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al in view of Kowalski(5570000) as applied to claim 21 above and further in view of HO(6895145)

Stanley et al as modified shows all the claimed limitations except for the light emissive device is a thin film light emitting diode device that displays human readable information and acts as an information display.

HO discloses the use of either LED or OLED to display information

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show the light emissive device is a light emitting diode device that displays human readable information and acts as an information

display as taught by Ho as it enables the efficient utilization of electricity generated by the photovoltaic device.

Stanley as modified further shows the LED displays human readable information and acts as an information display.

8. Claim 33 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Ho and Mori.

Stanley et al (figure 1) shows a shelter comprising a canopy defining a sheltered area thereunder including at least one vehicle parking space, a supporting structure (30, 34) connected to and supporting the canopy from a location outside the sheltered area and permitting substantially unobstructed access by a vehicle to the sheltered area, the shelter having no walls, an electrical load (98) operatively connected to the canopy and attached to its lower surface.

Stanley et al does not show the canopy being a photovoltaic canopy capable of producing electrical energy when exposed to light, a light emissive layer attached to its underside and the photovoltaic device generates electricity from the light emitted by the light emitting layer.

Mori discloses the use of a device that can generates electricity from both it upper and lower surface.

Ho discloses the use of a light emissive layer to generate light from electricity.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's structure to show the canopy being a photovoltaic canopy capable of producing electrical energy, the upper surface including a photovoltaic device that is capable of producing an electrical current when exposed to light and a photovoltaic lower second layer as taught by Mori in order to generate the maximum electricity from light sources in its

surrounding, and having the light emissive layer as taught by Ho attached to the lower surface, would enable the illumination of the surrounding beneath with minimum use of electricity per the nature of LED.

9. Claims 34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Ho and Mori as applied to claim 33 above and further in view of Britannica.

Stanley et al as modified shows all the claimed limitations except for an electrical load selected from the group consisting of the power distribution grid of a utility company and a battery.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show an electrical load selected from the group consisting of the power distribution grid of a utility company and a battery since having an electrical load connected to the device would allow the sell back of excess power generated by solar panel as taught by Britannica.

Per claim 35, it would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show the load being a battery and the battery is operatively connected to a light which illuminates the sheltered area since a battery stores energy and enables the time, selective use of the excess power generated by the solar panel.

10. Claims 36-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Ho and Mori

Stanley et al (figure 1) shows a carport comprising at least one canopy sheltering a parking area for at least one vehicle, a laterally placed supporting structure (30, 34) connected to the supporting the canopy from a location outside the parking area and permitting substantially unobstructed access by a vehicle to the sheltered area, the canopy comprising an upper surface area panel and a lower surface area, an electrical load (98) operatively connected to the photovoltaic canopy device mounted on the lower surface and operatively connected to the device for utilizing the electricity generated by the photovoltaic device when the device is exposed to light.

Stanly et al does not show the canopy being a photovoltaic canopy capable of producing electrical energy when exposed to sunlight, a light emitting diode panel attached thereunder the lower surface area, the canopy capable of generating electricity from the light emitted by the light emitting diode panel.

Mori discloses the use of a device that can generates electricity from both it upper and lower surface.

Ho discloses the use of a light emissive layer to generate light from electricity.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's structure to show the canopy being a photovoltaic canopy capable of producing electrical energy, the upper surface including a photovoltaic device that is capable of producing an electrical current when exposed to light and a photovoltaic lower second layer as taught by Mori in order to generate the maximum electricity from light sources in its surrounding, and having the light emissive layer as taught by Ho attached to the lower surface,

would enable the illumination of the surrounding beneath with minimum use of electricity per the nature of LED.

Stanley as modified further shows the photovoltaic device capable of generating electricity from the light emitted by the LED panel, and the electricity being DC electrical current..

Per claim 37, Stanley as modified shows all the claimed limitations except for the electrical load comprising a battery which is charged by the DC current produced by the photovoltaic device.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show electrical load comprising a battery which is charged by the DC current produced by the photovoltaic device because battery is a well known and well use means for storing excess power for later usage, and one having ordinary skill in the art would know to use a battery to store excess energy for later usage.

11. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Ho and Mori as applied to claim 36 above and further in view of Lawheed (6672064).

Stanley et al as modified shows all the claimed limitations except for an inverter for converting the DC current produced by solar device to an AC current to be connected to an electrical power distribution grid of a utility company.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show an inverter for converting the DC current produced by solar device to an AC current to be connected to an electrical power

distribution grid of a utility company as taught by Lawheed to enable the reselling of the excess energy back to the utility company resulting in cost saving and extra income.

12. Claim 39 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Ho and Mori as applied to claim 36 above and further in view of Britanica.

Stanley et al as modified shows all the claimed limitations except for a reverse meter for measuring AC current produced by an inverter.

Lawheed discloses the use of an inverter converting DC to AC current to be connected to an electrical grid.

Britanica discloses the well known use of reverse metering for reselling excess electricity back to the utility company.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show the use of an inverter converting DC to AC current to be connected to an electrical grid as taught by Lawheed and a reverse meter as taught by Britanica for measuring AC current produced by the inverter in order to convert DC to AC current to be connected to the power grid of a utility company and measuring the correct amount of resell energy back to the company to easily and correctly calculate the money involved.

13. Claims 40-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanley et al (5261435) in view of Kowalski as applied to claim 21 above and further in view of Ho.

Stanley et al as modified shows all the claimed limitations except for a canopy including at least two panels, each panel having a light emitting diode on the lower surface thereof, wherein the light emitting diode panels form an information display.

It would have been obvious to one having ordinary skill in the art at the time of the invention to modify Stanley et al's modified structure to show a canopy including at least two panels in order to form a canopy capable of covering the desired large area without having to generate a complicated, and large canopy, and each panel having a light emitting diode on the lower surface thereof, wherein the light emitting diode panels form an information display as taught by Ho, would allow for the illumination of the surrounding beneath with minimum use of electricity per the nature of LED.

Stanley et al as modified further shows the LED panels forming an information display as the panels themselves are information display.

Response to Arguments

Applicant's arguments with respect to claims 21, 23-29, 31-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art shows different photovoltaic panel designs.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Phi D A whose telephone number is 571-272-6864. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Glessner can be reached on 571-272-6843. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Phi D A/
Primary Examiner, Art Unit 3633

Phi Dieu Tran A

23/02/091/5/08